BRAIN RESEARCH

VOL. 590 NO. 1/2 **11 SEPTEMBER 1992**

CONTENTS

Announcement from the Publisher v

Guidelines for the submission of manuscripts vii

Research Reports

Excitatory effects of thyrotropin-releasing hormone on neurons within the nucleus ambiguus of adult guinea pigs
S.M. Johnson and P.A. Getting (USA) 1

Changes of labile metabolites during anoxia in moderately hypo- and hyperthermic rats: correlation to membrane fluxes of K^+
K.-i. Katsura, H. Minamisawa, A. Ekholm, J. Folbergrová and B.K. Siesjö (Sweden, Japan, Czechoslovakia) 6

Gamma-vinyl GABA prevents hippocampal and substantia nigra reticulata damage in repetitive transient forebrain ischemia
A. Shuaib, S. Ijaz, S. Hasan and J. Kalra (Canada) 13

Testosterone regulates substance P within neurons of the medial nucleus of the amygdala, the bed nucleus of the stria terminalis and the medial preoptic area of the male golden hamster
J.M. Swann and S.W. Newman (USA) 18

Photoperiodic regulation of substance P immunoreactivity in the mating behavior pathway of the male golden hamster
J.M. Swann and N. Macchione (USA) 29

Selective activation of mesoamygdaloid dopamine neurons by conditioned stress: attenuation by diazepam
M.L. Coco, C.M. Kuhn, T.D. Ely and C.D. Kilts (USA) 39

Protective effects of serotonin reuptake inhibitors, citalopram and clomipramine, against hippocampal CA1 neuronal damage following transient ischemia in the gerbil
N. Nakata, H. Kato and K. Kogure (Japan) 48

Immunocytochemical localization of 205 kDa microtubule-associated protein (205 kDa MAP) in the guinea pig organ of Corti
T. Oshima, S. Okabe and N. Hirokawa (Japan) 53

Localization of the central antinociceptive effects of diclofenac in the rat
R.L. Björkman, T. Hedner, K.M. Hallman, M. Henning and J. Hedner (Sweden) 66

Clorazepate synchronizes cultured rat C6 glioma in the early G_1 phase of the cell cycle
C. Maguire, C. O'Connell and C.M. Regan (Ireland) 74

Trigeminal and dorsal column nuclei projections to the anterior pretectal nucleus in the rat
A. Yoshida, B.J. Sessle, J.O. Dostrovsky and C.Y. Chiang (Canada) 81

Regional distribution of cells expressing glycine receptor α_2 subunit mRNA in the rat brain
K. Sato, H. Kiyama and M. Tohyama (Japan) 95

Regulation of neurotransmitter enzyme by quisqualate subtype glutamate receptors in cultured cerebellar and hippocampal neurons
J. Rodriguez, W. Jacques-Berg, C. Sanfeliu and A.J. Patel (UK) 109

Localization of the *ras*-like rab3A protein in the adult rat brain
K.L. Moya, B. Tavitian, A. Zahraoui and A. Tavitian (France) 118

Suppression of interictal bursting in hippocampus unleashes seizures in entorhinal cortex: a proepileptic effect of lowering $[K^+]_o$ and raising $[Ca^{2+}]_o$
A.C. Bragdon, H. Kojima and W.A. Wilson (USA) 128

Physiological and pharmacological evidence for histamine as a neurotransmitter in the olfactory CNS of the spiny lobster
E. Orona and B.W. Ache (USA) 136

Studies related to the use of colchicine as a neurotoxin in the septohippocampal cholinergic system
S.R. Ginn and G.M. Peterson (USA) 144

Electrophysiological effects of MK-801 on rat nigrostriatal and mesoaccumbal dopaminergic neurons
J. Zhang, L.A. Chiodo and A.S. Freeman (USA) 153

Alzheimer neurofibrillary tangles contain 2.1 nm filaments structurally identical to the microtubule-associated protein τ: a high-resolution transmission electron microscope study of tangles and senile plaque core amyloid
G.C. Ruben, K. Iqbal, H.M. Wisniewski, J.E. Johnson Jr. and I. Grundke-Iqbal (USA) 164

Zucker obese rats: defect in brain histamine control of feeding
H. Machidori, T. Sakata, H. Yoshimatsu, K. Ookuma, K. Fujimoto, M. Kurokawa, A. Yamatodani and H. Wada (Japan) 180

Characterization of the oligosaccharide side chains on kainate binding proteins and AMPA receptors
M.F. Hullebroeck and D.R. Hampson (Canada) 187

Neurons of the chick brain and retina expressing both α-bungarotoxin-sensitive and α-bungarotoxin-insensitive nicotinic acetylcholine receptors: an immunohistochemical analysis
L.R.G. Britto, D.E. Hamassaki-Britto, E.S. Ferro, K.T. Keyser, H.J. Karten and J.M. Lindstrom (Brazil, USA) 193

Glutamate neurotoxicity in the developing rat cochlea is antagonized by kynurenic acid and MK-801
R. Janssen (USA) 201

(contents contined on p. 358)

Cited in Biological Abstracts (BIOSIS) - Chem. Abstracts - Index Medicus (MEDLINE) - Current Contents (Life Sci.) - Excerpta Medica (EMBASE) - Psychological Abstracts (PsycINFO) - Pascal et Francis (INIST-CNRS) - RIS (Reference Update)

(contents continued)

WGA–HRP and choleragenoid-HRP as anterogradely transported tracers in vagal visceral afferents and binding of WGA and choleragenoid to nodose ganglion neurons in rodents
B. Robertson, B. Lindh and H. Aldskogius (Sweden) 207
Transport, uptake, and metabolism of blood-borne vasopressin by the blood–brain barrier
B.V. Zlokovic, W.A. Banks, H. El Kadi, J. Erchegyi, J.B. Mackic, J.G. McComb and A.J. Kastin (USA) 213
Species diversity of neuronectin and cytotactin expression patterns in the vertebrate central nervous system
W.J. Rettig, S. Hoffman, S.L. Su and P. Garin-Chesa (USA) 219
Further evidence for differential affinity states of the serotonin$_{1A}$ receptor in rat hippocampus
R. Mongeau, S.A. Welner, R. Quirion and B.E. Suranyi-Cadotte (Canada) 229
τ and ubiquitin in the human hypothalamus in aging and Alzheimer's disease
D.F. Swaab, I. Grundke-Iqbal, K. Iqbal, H.P.H. Kremer, R. Ravid and J.A.P. Van de Nes (The Netherlands, USA) 239
Effect of subcutaneous administration of the chemical algogen formalin, on 5-HT metabolism in the nucleus raphe magnus and the medullary dorsal horn: a voltammetric study in freely moving rats
S. Puig, J.P. Rivot and J.M. Besson (France) 250
GABA, acting at both GABA$_A$ and GABA$_B$ receptors, inhibits the release of cholecystokinin-like material from the rat spinal cord in vitro
J.J. Benoliel, S. Bourgoin, A. Mauborgne, M. Pohl, J.C. Legrand, M. Hamon and F. Cesselin (France) 255
Blood–brain barrier integrity and brain water and electrolytes during hypoxia/hypercapnia and hypotension in newborn piglets
B.S. Stonestreet, G.H. Burgess and H.F. Cserr (USA) 263
Amastatin potentiates drinking elicited by osmotic stimuli: evidence for peptidergic mediation of intracellular dehydration-induced thirst
M.J. Sullivan and A.K. Johnson (USA) 271
Behavioral effects of mouse interferons-α and -γ and human interferon-α in mice
L.S. Crnic and M.A. Segall (USA) 277
Pulse jitter retards kindling without affecting brain-stimulation reward
J.T. Rick and G. Fouriezos (Canada) 285
Subthalamic nucleus cell firing in the 6-OHDA-treated rat: basal activity and response to haloperidol
J.R. Hollerman and A.A. Grace (USA) 291

Short Communications

Reactive proliferation of astrocytes studied by immunohistochemistry for proliferating cell nuclear antigen
T. Miyake, M. Okada and T. Kitamura (Japan) 300
α_1-Adrenergic stimulation of low K_m GTPase in rat striata is diminished with age
R. Villalobos-Molina, J.A. Joseph and G.S. Roth (USA) 303
Changes in D2 but not D1 receptor binding in the striatum following a selective lesion of striatopallidal neurons
M.B. Harrison, R.G. Wiley and G.F. Wooten (USA) 305
Flunarizine induces a transient loss of tyrosine hydroxylase immunoreactivity in nigrostriatal neurons
M. Takada, T. Kono and S.T. Kitai (USA) 311
Prenatal ontogeny of substance P-like immunoreactivity in the parabrachial nucleus of the human fetus – an immunocytochemical study
L.G. Wang, Z.R. Rao and J.S. Li (P.R. China) 316
Amelioration of ischemic spinal cord damage by postischemic treatment with propentofylline (HWA 285)
V. Danielisová and M. Chavko (Czechoslovakia) 321
Optic nerve transection decreases 2-[^{125}I]iodomelatonin binding in the chick optic tectum
D.N. Krause, J.A. Siuciak and M.L. Dubocovich (USA) 325
F11 neuroblastoma × DRG neuron hybrid cells express inhibitory μ- and δ-opioid receptors which increase voltage-dependent K^+ currents upon activation
S.F. Fan, K.F. Shen, M.A. Scheideler and S.M. Crain (USA, Denmark) 329
Preservation of energy metabolites by carnitine in the mouse brain under ischemia
M. Matsuoka and H. Igisu (Japan) 334
Pre-Bötzinger complex in cats: respiratory neuronal discharge patterns
C.A. Connelly, E.G. Dobbins and J.L. Feldman (USA) 337
Effects of benzylpiperazine derivatives on the neurotoxicity of 3,4-methylenedioxymethamphetamine in rat brain
K. Hashimoto, H. Maeda and T. Goromaru (Japan) 341
Comparison of the effects of NMDA antagonists on medial vestibular nucleus neurons in brainstem slices from labyrinthine-intact and chronically labyrinthectomized guinea pigs
P.F. Smith and C.L. Darlington (New Zealand) 345
Specificity of 192 IgG-saporin for NGF receptor-positive cholinergic basal forebrain neurons in the rat
A.A. Book, R.G. Wiley and J.B. Schweitzer (USA) 350

Author Index 356

Erratum 359